Stuttgarter Physikalisches Kolloquium

Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme
Fachbereich Physik, Universität Stuttgart

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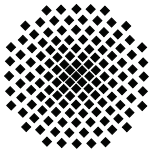

Dienstag, 7. Mai 2013	17.15 Uhr	Hörsaal 2 D5

Stuttgarter Max-Planck-Institute, Heisenbergstraße 1, 70569 Stuttgart-Büsnau

Superfluid Helium-3: Universal Concepts for Condensed Matter and the Big Bang

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Abstract

Since their discovery in 1971 the superfluid phases of Helium-3 have proved to be the ideal testing ground for many fundamental concepts of modern physics. Phenomena such as triplet Cooper pairing, macroscopic quantum coherence, spontaneous breaking of high symmetries, and the formation of exotic topological defects are not only an important enrichment of the physics of condensed matter, but also provide important links to particle physics, the structure of the early universe and, most recently, quantum turbulence. In my lecture I will present a simple introduction into the physics of superfluid Helium-3, and describe the progress made in this fascinating field of basic research.